Wyatt Way Reconstruction Project

Open House

April 20, 2016

CITY OF BAINBRIDGE ISLAND

Including:

- Public Works
- Non-Motorized Transportation Advisory Committee
- Bainbridge Island City Council

Meeting Agenda

- Design Team Presentation (25 mins)
- Q&A (20 mins)

- Open House (40 mins)
  - four stations; similar content as presentation
  - Corridor Design (2 stations)
  - Intersection Analysis (2 stations)

Overview

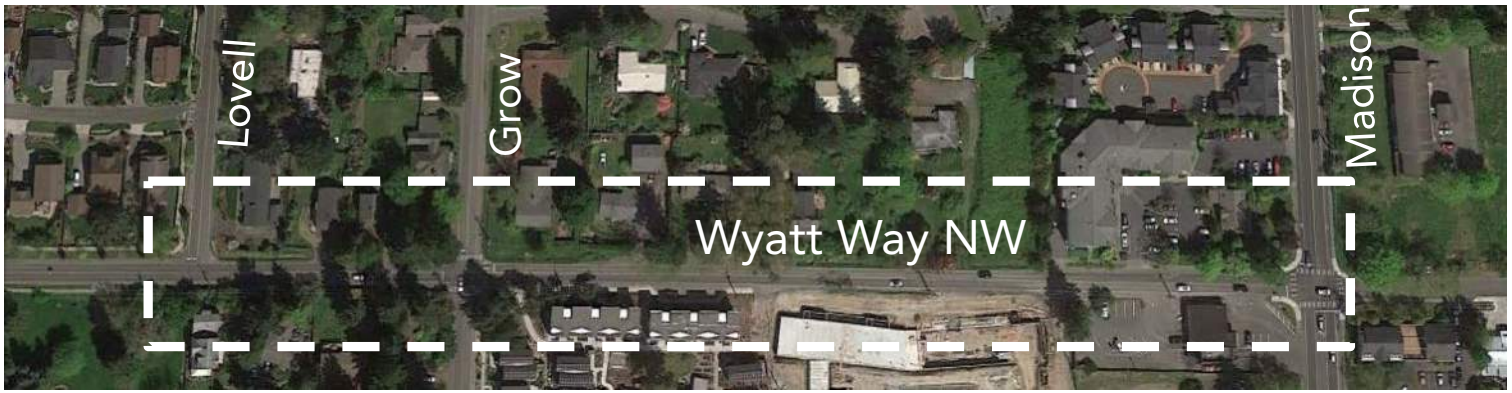
Project Background

Funding

$2,516,000 Transportation Improvement Board Grant
$1,114,000 City Matching Funds
$ 70,000 Developer Matching credit (Grow Ave Dev. Frontage Improvements)
$3,700,000 Total

Schedule

- Duration 3 or more years
- Select preferred alternative by summer of 2016
- Earliest construction start is the summer of 2018



Project Goals

Safety: complete street with sidewalk and bike lanes

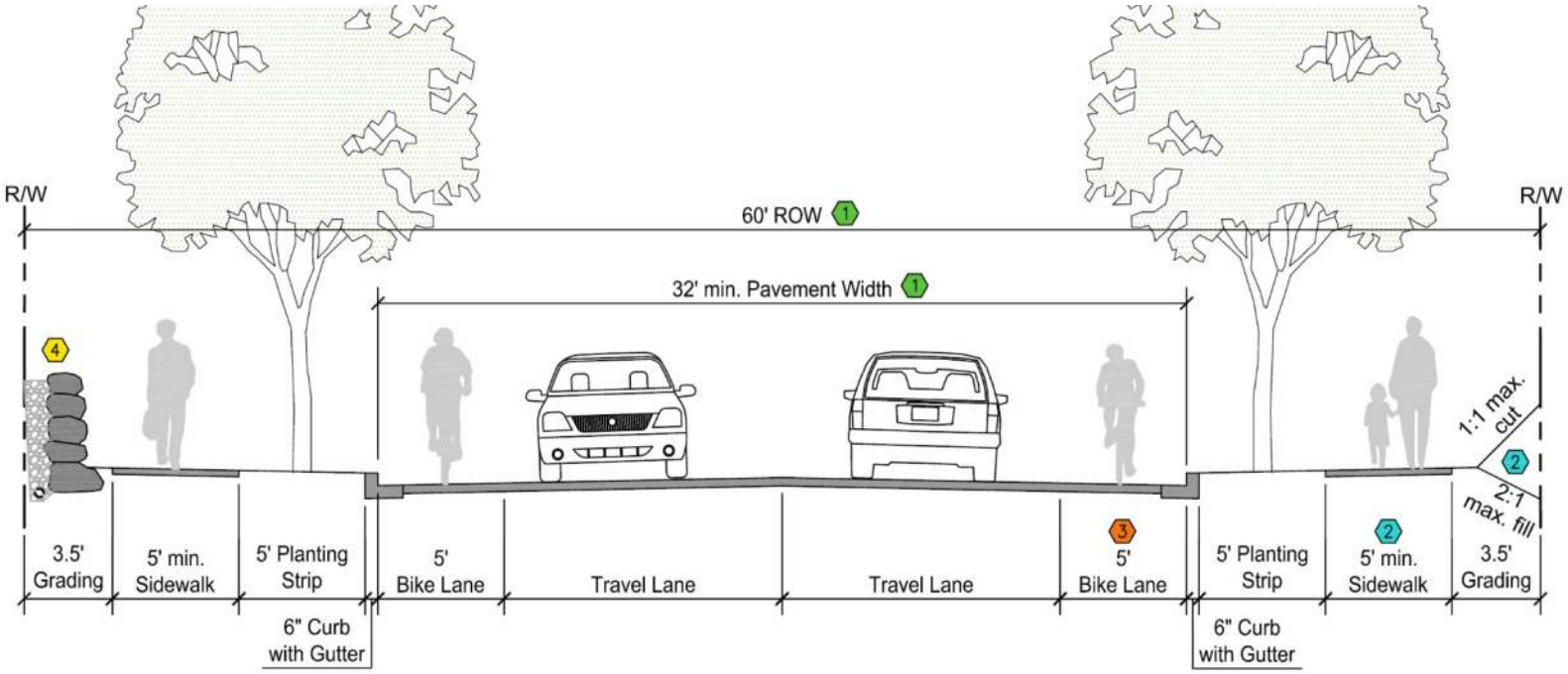
Mobility: preserve vehicle LOS and improve non-motorized LOS and connections

Preservation: road surfacing and drainage reconstruction

Design Approach

- Corridor Design
  - City Standard
  - Considerations for Context Sensistive Design
- Intersection Analysis
  - Madison Avenue
  - Grow Avenue
- Grow Ave Neighborhood Greenway Concept

Corridor Design – City Standard



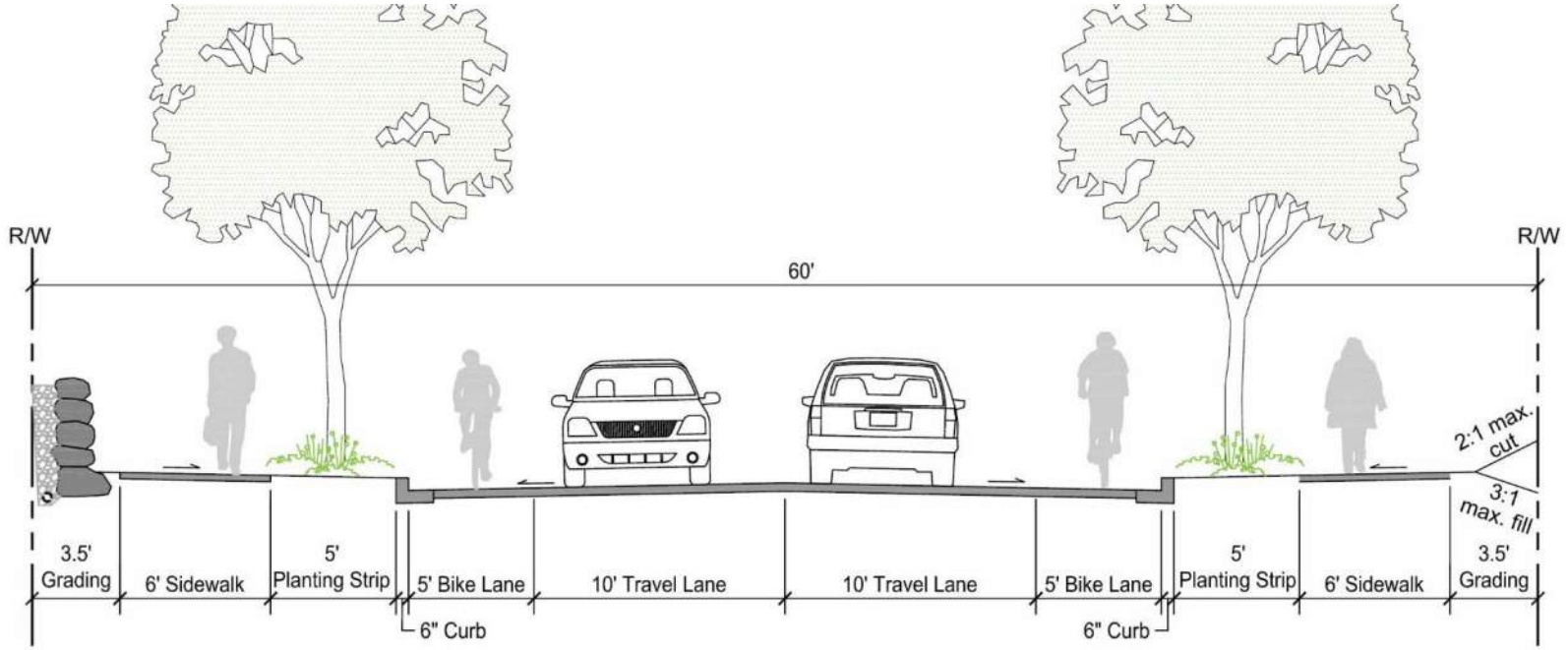
Source of Standard Dimension

1. COBI Design & Construction Standards: Section 7 - Roads and Streets
2. COBI Standard Dwg. No. 7-010: Street Standard Secondary Arterial - Urban
3. AASHTO 2012 Guide for the Development of Bicycle Facilities
4. COBI Standard Dwg. No. 8-290: Rockery Details Native Cut. Ht. Over 4 Ft.

CITY OF BAINBRIDGE ISLAND

MIG | SvR LOCHNER

Corridor Design – Modified Standard



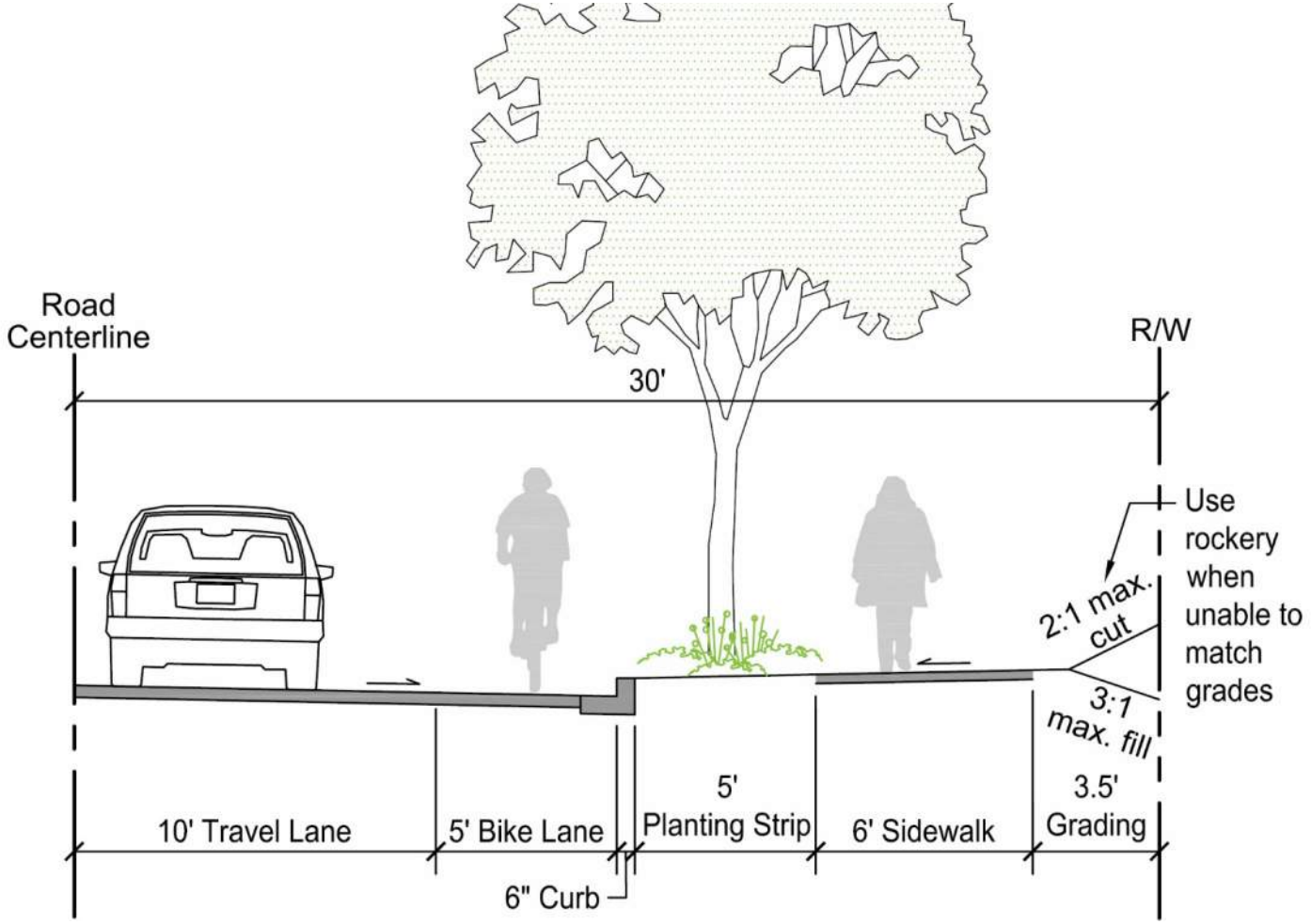
Context Sensitive Design Options

1. Modified City Standard
2. Natural Drainage for Water Quality Treatment
3. Reduce Impacts at Existing Trees
4. Reduce Impacts for New Street Trees
5. Shared Lane Markings to Reduce Property Impacts
6. Retrofit Existing Parking with Tree Bulb

CITY OF BAINBRIDGE ISLAND

MIG | SvR LOCHNER

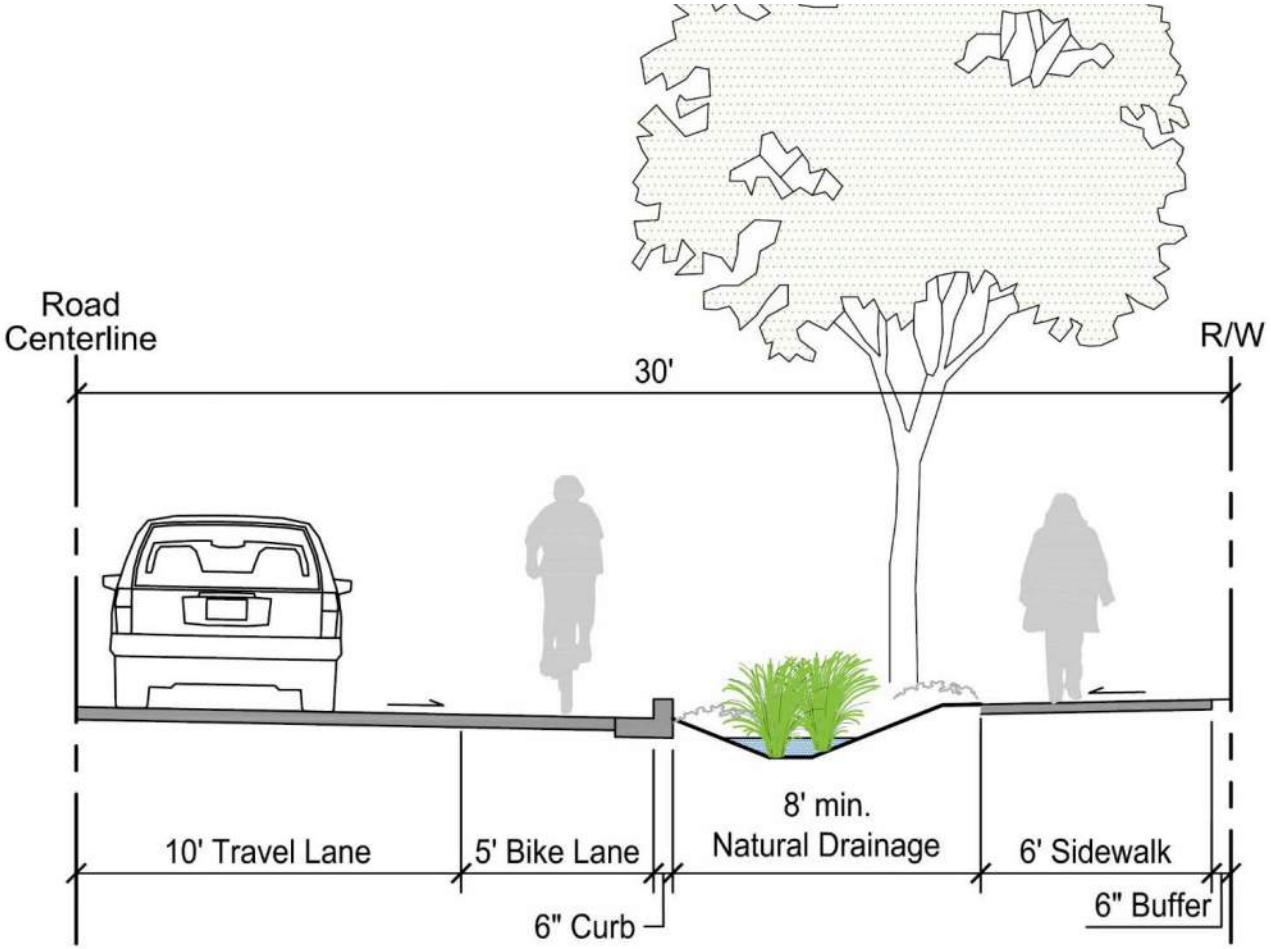
Section 1 – Modified City Standard



CITY OF BAINBRIDGE ISLAND

MIG | SvR LOCHNER

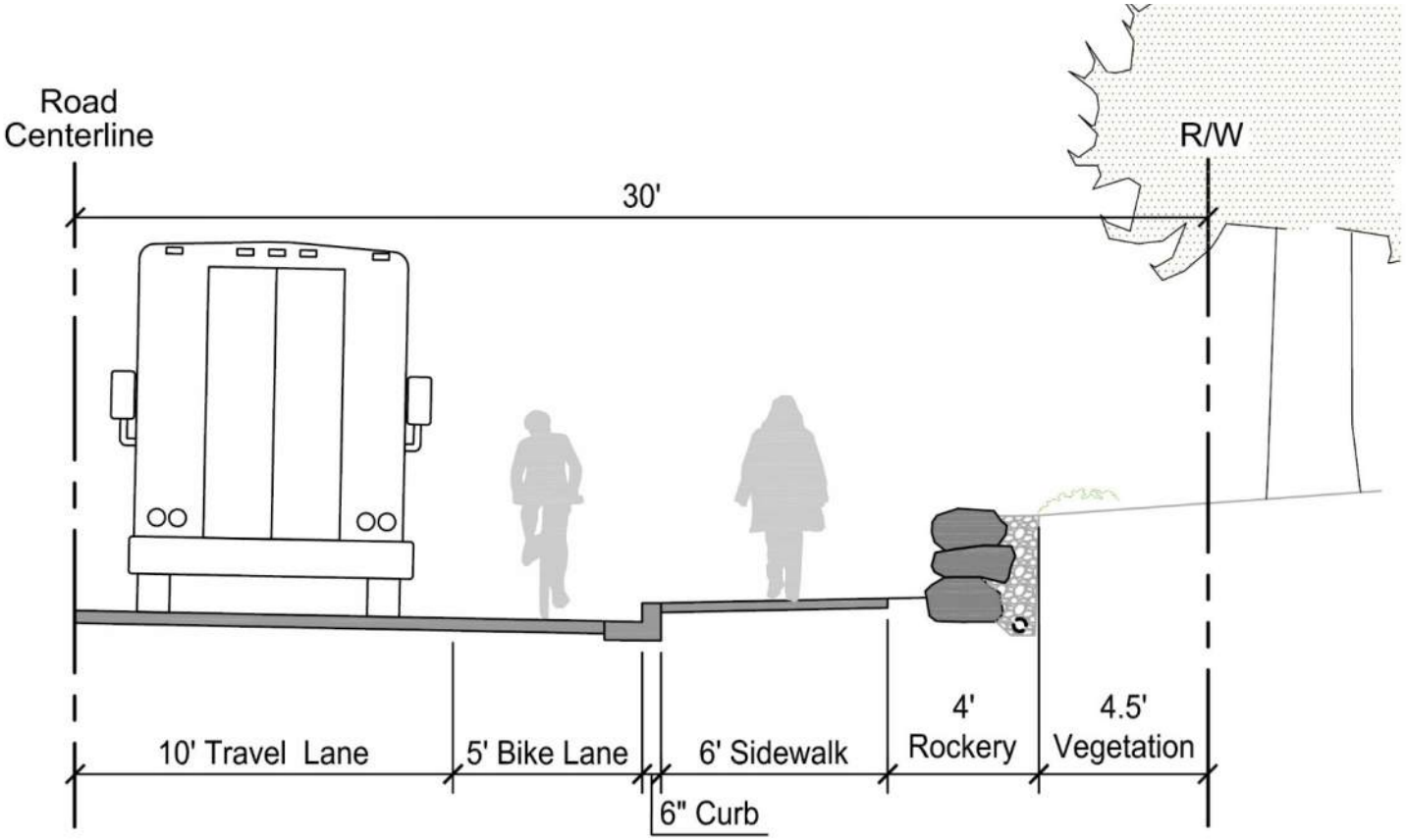
Section 2 – Natural Drainage for Water Quality



CITY OF BAINBRIDGE ISLAND

MIG | SvR | LOCHNER

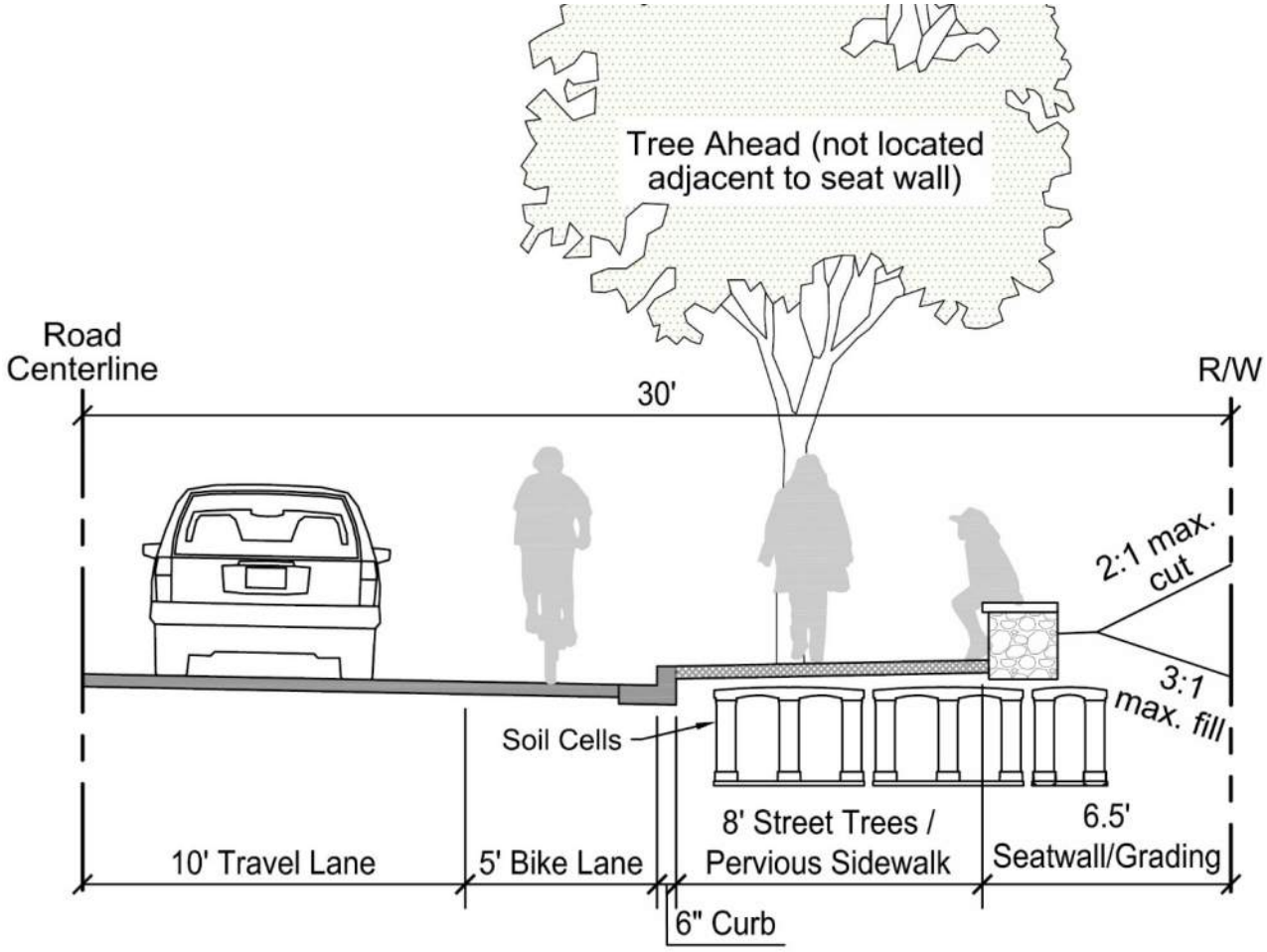
Section 3 – Reduce Impacts at Existing Trees



CITY OF BAINBRIDGE ISLAND

MIG | SvR LOCHNER

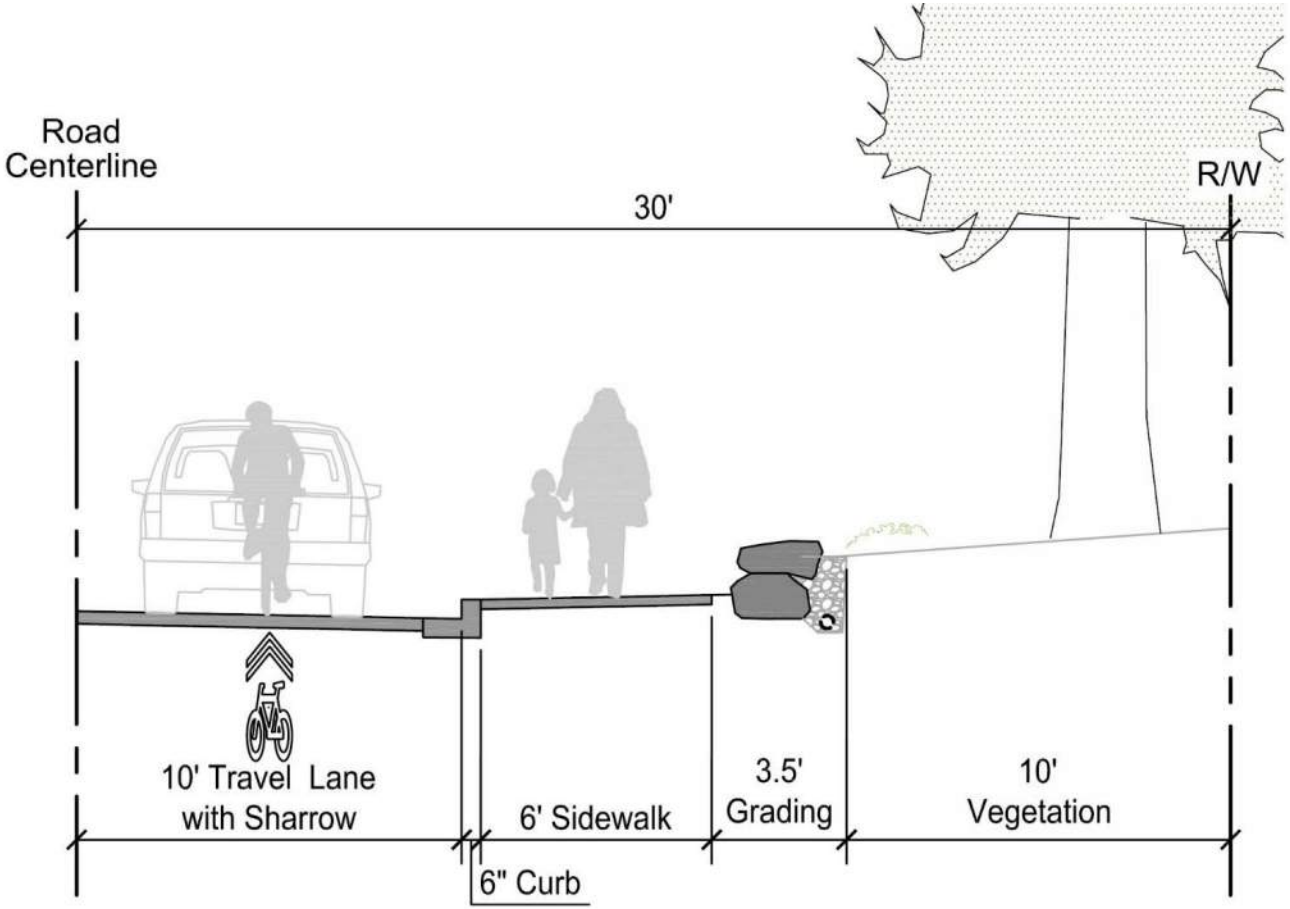
Section 4 – Reduce Impacts for New Street Trees



CITY OF BAINBRIDGE ISLAND

MIG | SvR LOCHNER

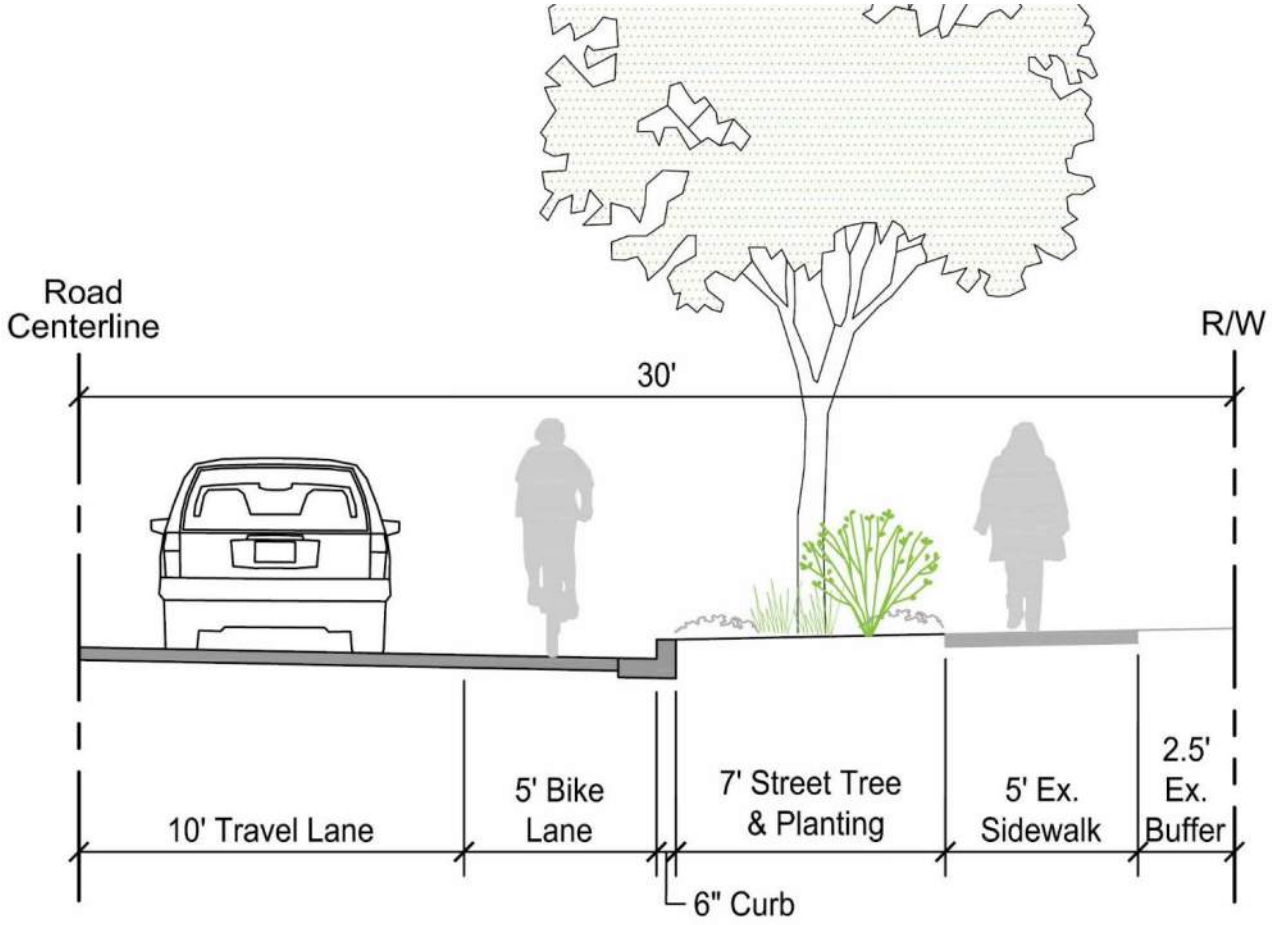
Section 5 – Shared Lane Markings to Reduce Impacts



CITY OF BAINBRIDGE ISLAND

MIG | SvR LOCHNER

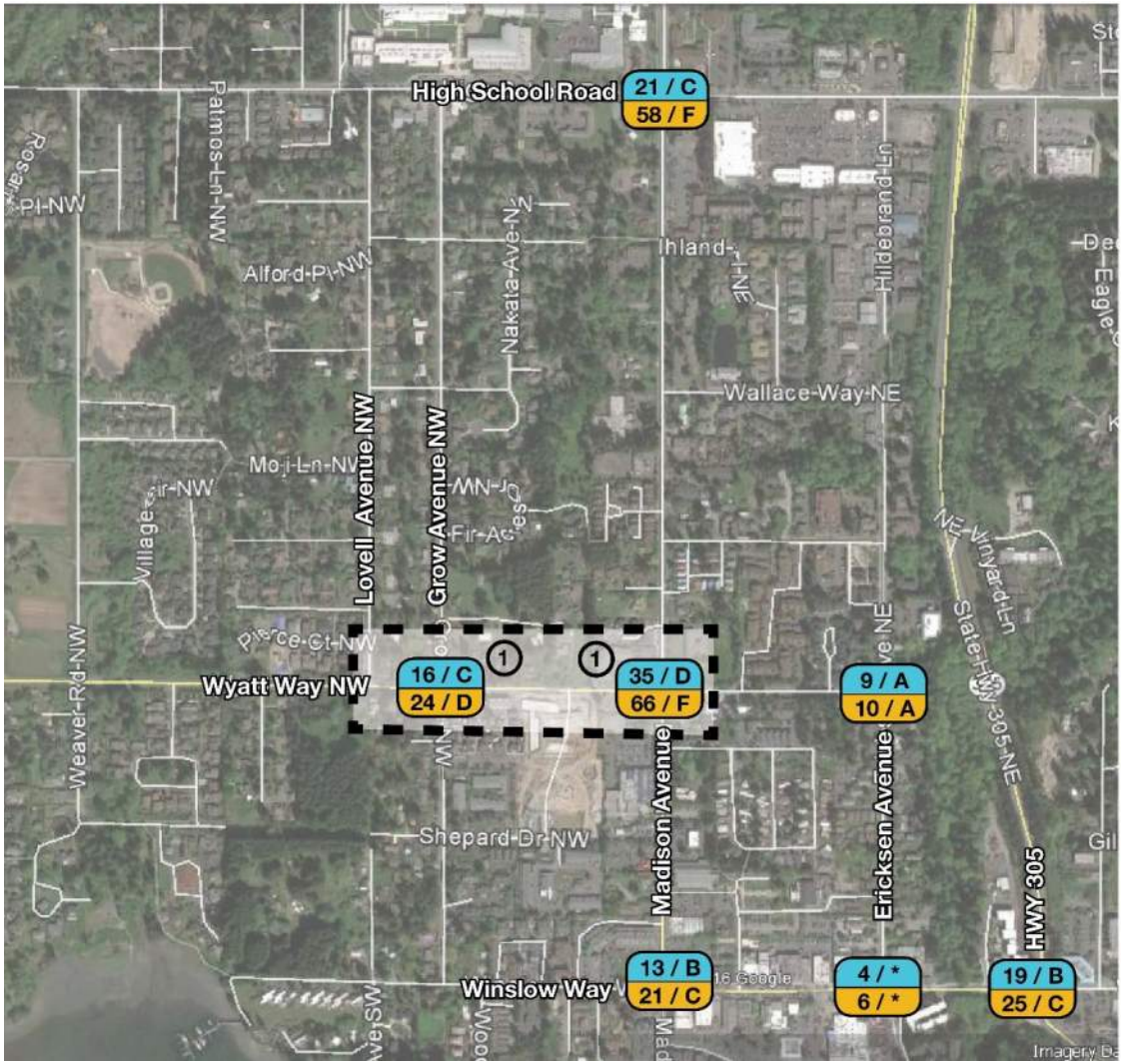
Section 6 – Retrofit Existing Parking with Tree Bulb



CITY OF BAINBRIDGE ISLAND

MIG | SvR LOCHNER

Intersection Analysis



Intersection Options

1. No Change / All-Way Stop
2. Mini-Roundabout
3. Urban Compact Roundabout
4. Traffic Signal

Legend

2014
Delay in Seconds / LOS

21 / C
21 / C

2035
Delay in Seconds / LOS

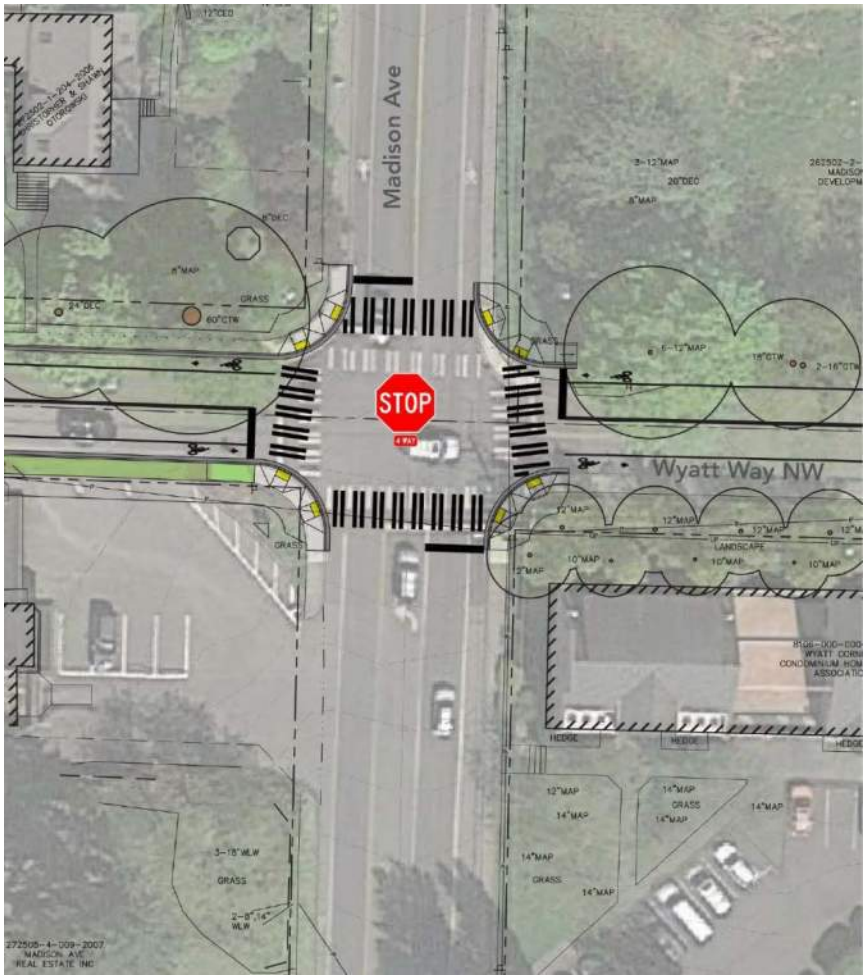
* Island wide traffic model LOS is not computed for this two-way stop

(1) LOS and delay at project intersections for 2014/2035 is based on existing conditions

CITY OF BAINBRIDGE ISLAND

MIG | SvR | LOCHNER

Wyatt & Madison
All-Way Stop Option



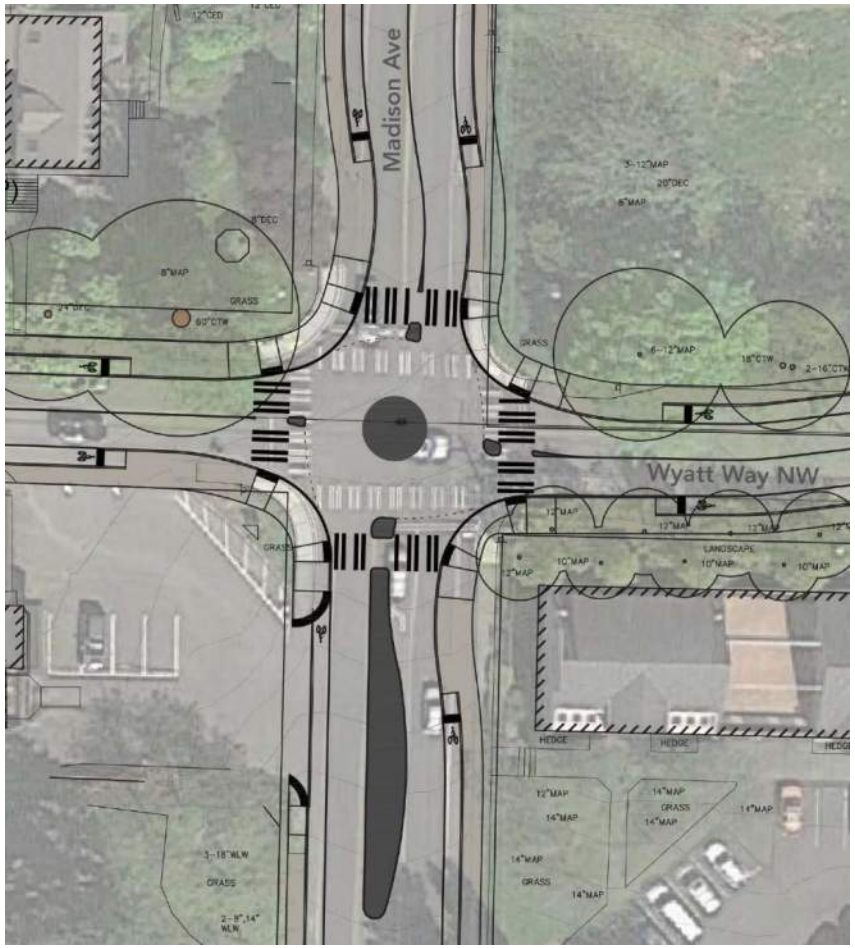
Features:
- Existing operation

Advantages:
- Almost no cost or right of way impacts

Issues:
- Doesn't accommodate future traffic volumes

CITY OF BAINBRIDGE ISLAND | MIG | SvR | LOCHNER

Wyatt & Madison
Mini-roundabout Option



Features:
- Paved and mountable center island

Advantages:
- Less right of way needed
- Limited annual maintenance cost
- Accommodates future growth

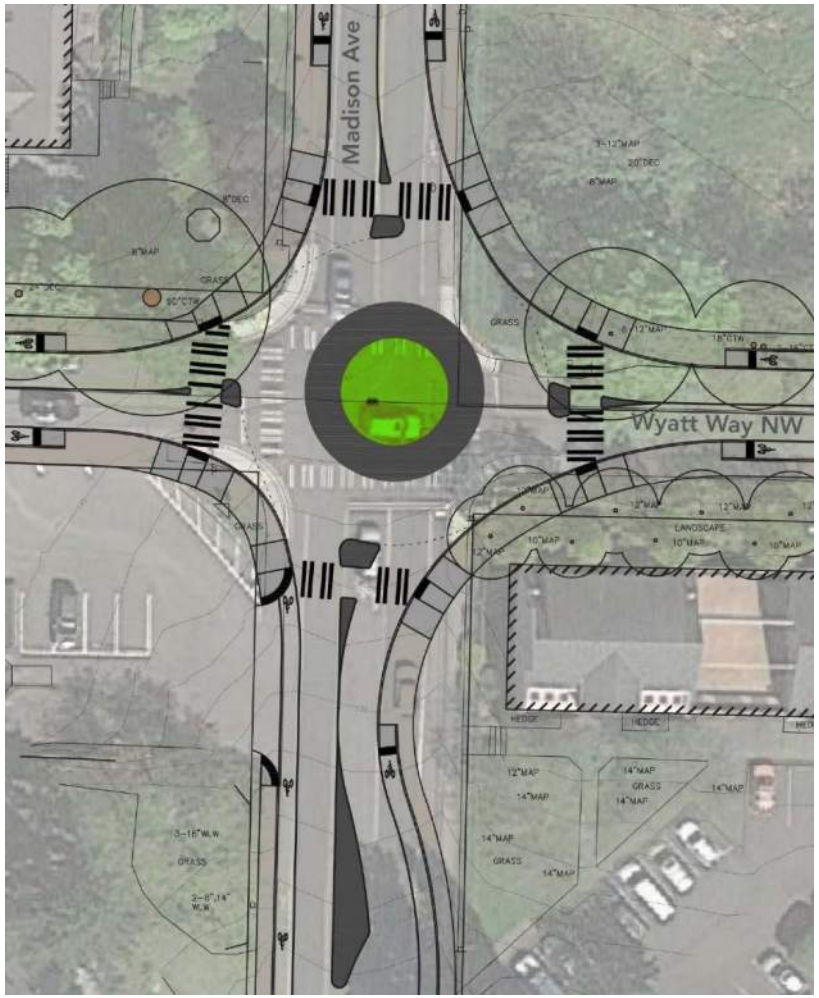
Issues:
- Right-of-way acquisition

CITY OF BAINBRIDGE ISLAND

MIG | SvR LOCHNER

Wyatt & Madison

Urban Compact Roundabout Option



Features:

- Landscaped center island

Advantages:

- Limited annual maintenance cost
- Accommodates future growth

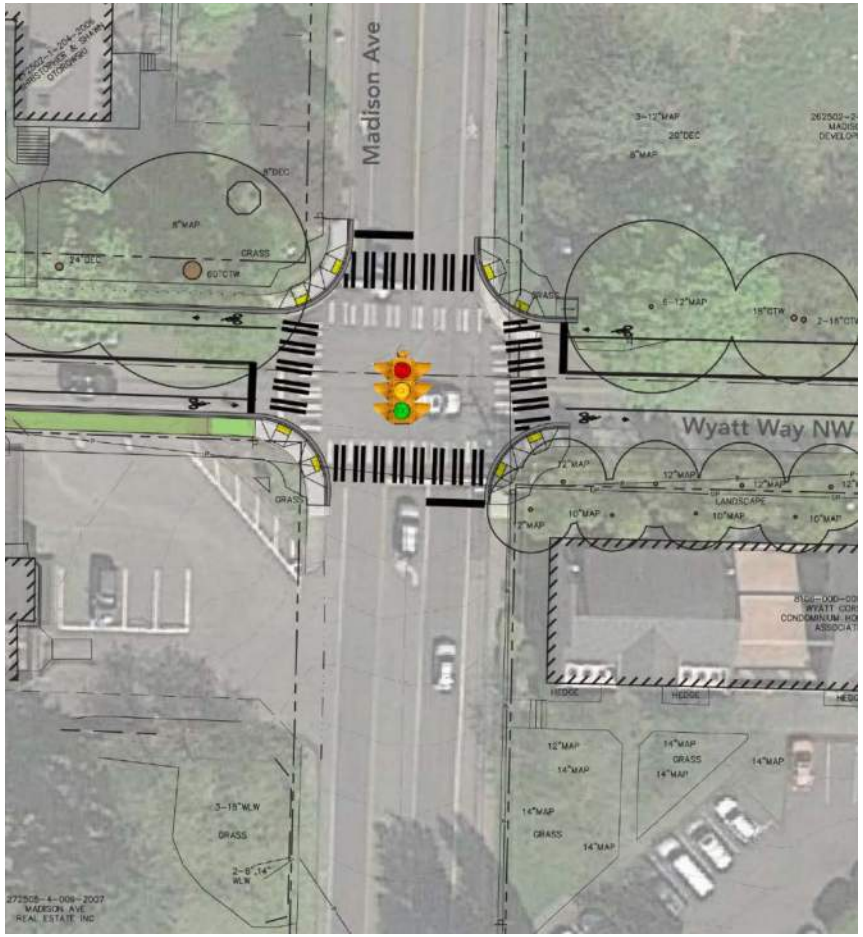
Issues:

- Right of way acquisition
- Higher construction cost
- Impact to existing trees

CITY OF BAINBRIDGE ISLAND

MIG | SvR LOCHNER

Wyatt & Madison
Traffic Signal Option



Features:
- New traffic signal poles & pedestrian push buttons

Advantages:
- Fits within existing right of way
- Accommodates future growth

Issues:
- Annual maintenance cost
- Safety

CITY OF BAINBRIDGE ISLAND

MIG | SvR LOCHNER

Intersection Analysis

Wyatt & Madison

Summary of Key Evaluation Criteria							
Intersection Option	Future LOS Performance	Connectivity	Safety	Capital Costs	Operations (Cost & Maintenance)	Right-of-Way Impacts	Tree Impacts
All-Way Stop	🔴	🟢	🟡	🟢	🟢	🟢	🟢
Mini-Roundabout	🟢	🟢	🟢	🟡	🟢	🟡	🟡
Urban Compact Roundabout	🟢	🟢	🟢	🔴	🟢	🔴	🔴
Traffic Signal	🟢	🟢	🟡	🟡	🔴	🟢	🟢

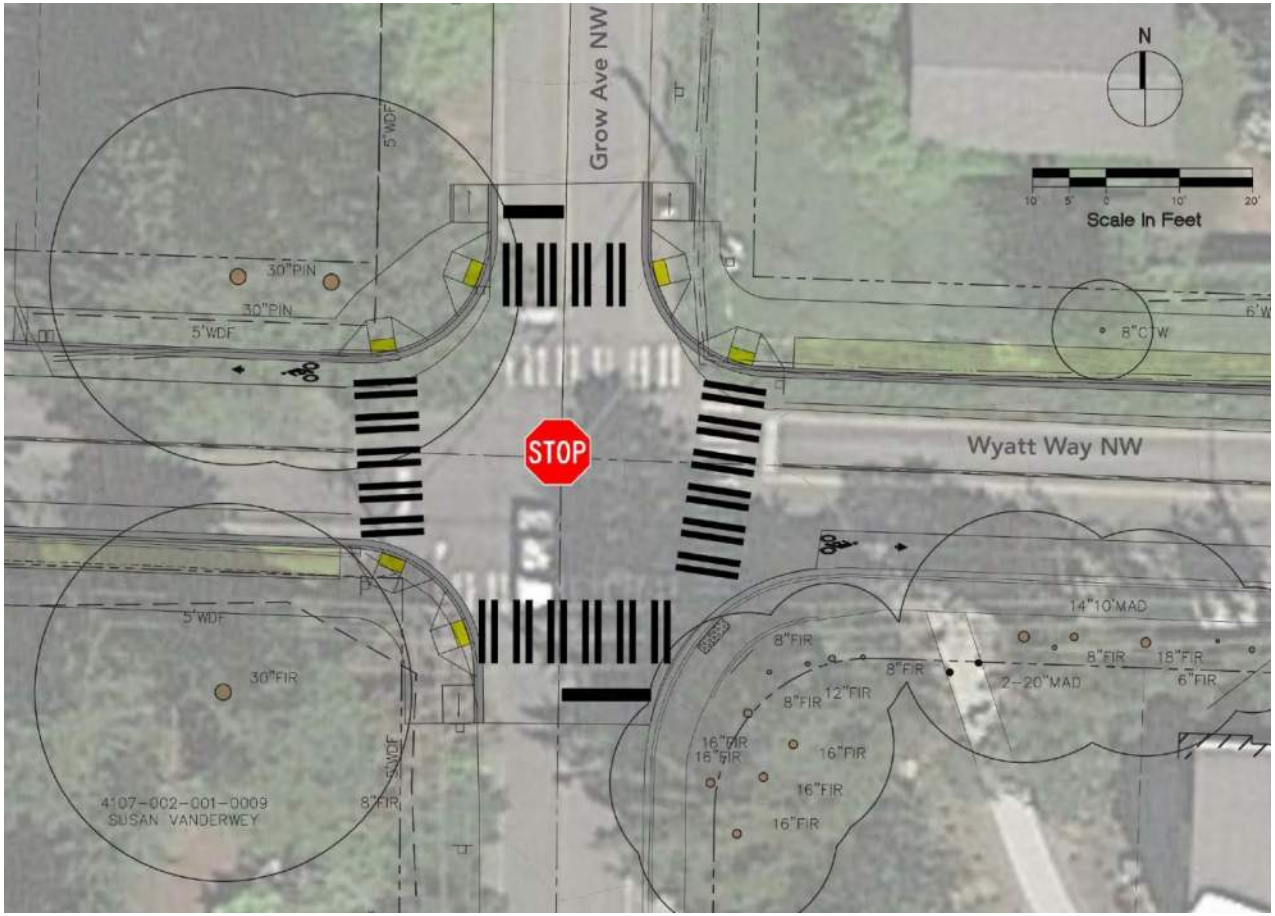
Legend

- 🟢 Desireable
- 🟡 Neutral
- 🔴 Less desireable

CITY OF BAINBRIDGE ISLAND

MIG | SvR LOCHNER

Wyatt & Grow



Intersection Options

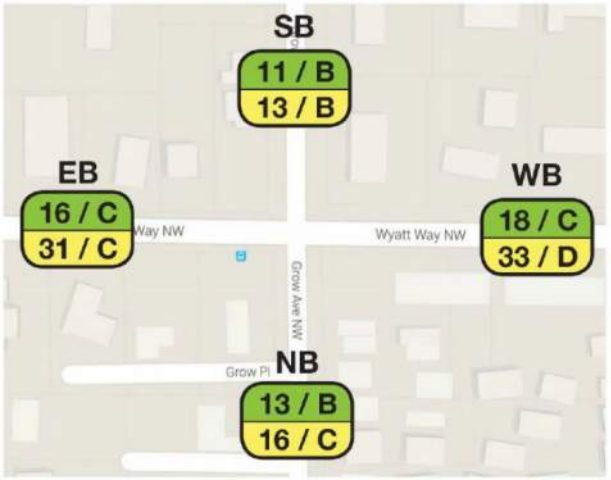
1. All-Way Stop
2. Two-Way Stop
   - 2a. RRFB
   - 2b. HAWK signal

Issues

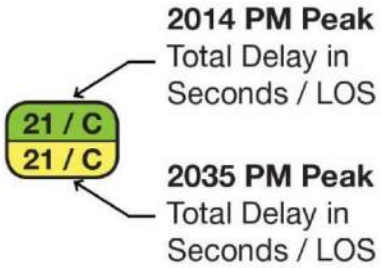
1. Sightlines
2. Grades
3. Vehicle Speed

CITY OF BAINBRIDGE ISLAND | MIG | SvR | LOCHNER

Wyatt & Grow
All-Way Stop Option
(No Change)



Legend - Modeling Results



Features:
- Stop signs and stop lines

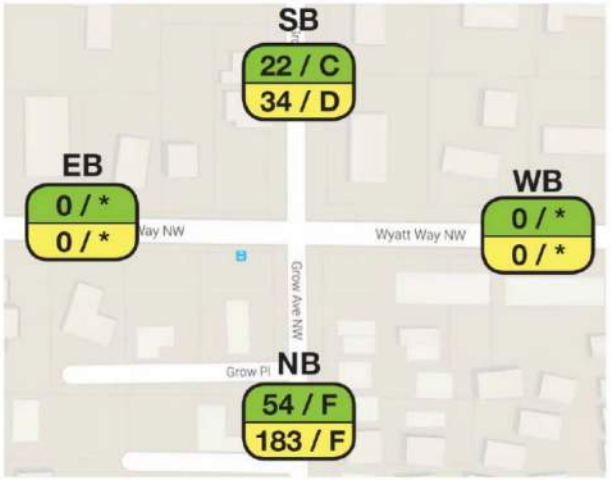
Advantages:
- Accommodates future growth
- Connectivity for people walking and biking across Wyatt Way
- Supports greenway concept

Issues:
- Delay on Wyatt Way
- Traffic on Grow Ave

CITY OF BAINBRIDGE ISLAND | MIG | SvR | LOCHNER

Wyatt & Grow

Two-Way Stop Option (for N/S Traffic)



Features:

- Remove stop sign on Wyatt Way
- Use RRFB or HAWK

Advantages:

- Decreases delay on Wyatt Way

Issues:

- Increases delay on Grow Ave
- Speeds on Wyatt Way
- Connectivity

Legend - Modeling Results

2014 PM Peak
Total Delay in Seconds / LOS

21 / C
21 / C

2035 PM Peak
Total Delay in Seconds / LOS

* LOS not Computed for Two-Way Stop

CITY OF BAINBRIDGE ISLAND

MIG | SvR | LOCHNER

Wyatt & Grow

Rectangular Rapid Flashing Beacon

Features:

- Pedestrian activated flashing yellow lights and advance signage
- Can be solar powered

Advantages:

- Less expensive than HAWK beacon
- Does not require signal poles or foundations
- Minimal impact to trees

Issues:

- Only uses yellow flashers

CITY OF BAINBRIDGE ISLAND

MIG | SvR LOCHNER

Wyatt & Grow
HAWK Signal

Features:
- Pedestrian activated red beacon with pedestrian crossing controls (Walk / Don't Walk)

Advantages:
- Uses red signal indication to tell drivers to stop when activated
- Red beacons improve driver compliance over amber beacons
- Minimal impact to trees

Issues:
- Requires signal poles, heads and foundations
- More expensive to install than RRFB

CITY OF BAINBRIDGE ISLAND

MIG | SvR LOCHNER

Intersection Analysis

Wyatt & Grow

Summary of Key Evaluation Criteria							
Intersection Options	Future LOS Performance	Connectivity	Safety	Capital Costs	Operations (Cost & Maintenance)	Right-of-Way Impacts	Tree Impacts
All-Way Stop	🟡	🟢	🟡	🟢	🟢	🟢	🟢
Two-Way Stop	🟢	🔴	🟡	🟢	🟢	🟢	🟢
RRFB	🟢	🟡	🟢	🟡	🟢	🟢	🟢
HAWK Beacon	🟢	🟢	🟢	🔴	🟡	🟢	🟢

Legend

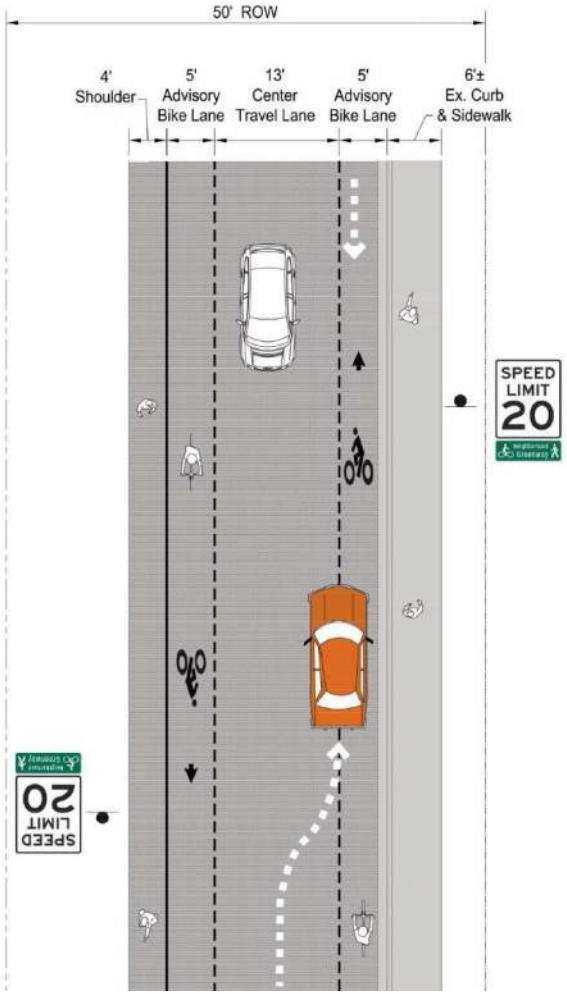
- 🟢 Desireable
- 🟡 Neutral
- 🔴 Less desireable

CITY OF BAINBRIDGE ISLAND

MIG | SvR | LOCHNER

Grow Ave Neighborhood Greenway Concepts

Advisory Bike Lanes with Shoulder & Signage



The Netherlands
(Photo: Andre De Graff)

Advantages:

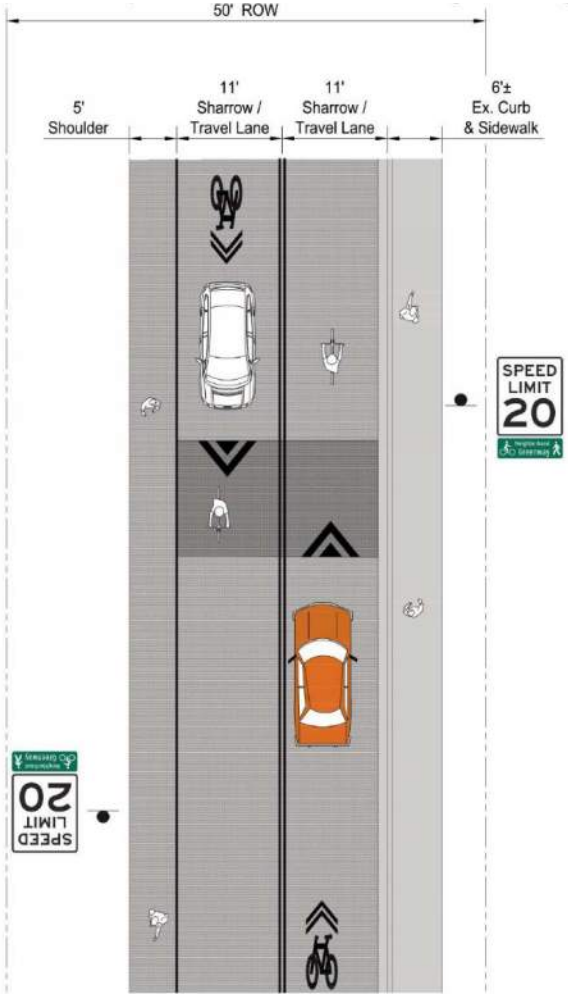
- Potential option when street is too narrow for standard bike lanes
- Striping (and optional colored pavement) offers visual separation on low-traffic streets
- Slows vehicle traffic

Issues:

- Not a standard pavement marking (not in MUTCD)

Grow Ave Neighborhood Greenway Concepts

Speed Humps & Shared Lane Markings with Signage



Advantages:

- Prioritizes travel for people walking and biking
- Slows vehicle traffic
- Reinforces proper bicycle positioning on a shared street

CITY OF BAINBRIDGE ISLAND

MIG | SvR LOCHNER